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### NOTICE OF ALLOWANCE AND FEE(S) DUE

7590

03/09/2004

EXAMINER

Koda & Androlia 2029 Century Park East Suite 1430 Los Angeles, CA 90067-3024 LAM, TUAN THIEU

ART UNIT

PAPER NUMBER

2816

DATE MAILED: 03/09/2004

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1	APPLICATION NO. FILING DATE		FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
•	10/088,420	03/13/2002	Toshikazu Uchiyama	172A 3244 PCT	5068	

TITLE OF INVENTION: PIEZOELECTRIC OSCILLATOR

٢	APPLN. TYPE	. SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
	nonprovisional	NO	\$1330	\$300	\$1630	06/09/2004

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATEN <u>PROSECUTION ON THE MERITS IS CLOSED</u>. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHT THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPO PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM TH MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THE STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOV REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (O AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WIL BE REGARDED AS ABANDONED.

#### HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.
- B. If the status is changed, pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above and notify the United States Patent and Trademark Office of the change in status, or

If the SMALL ENTITY is shown as NO:

- A. Pay TOTAL FEE(S) DUE shown above, or
- B. If applicant claimed SMALL ENTITY status before, or is n claiming SMALL ENTITY status, check the box below and enclo the PUBLICATION FEE and 1/2 the ISSUE FEE shown above.
  - □ Applicant claims SMALL ENTITY status. See 37 CFR 1.27.
- II. PART B FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) w your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B Fee(s) Transmittal should completed and returned. If you are charging the fee(s) to your deposit account, section "4b" of Part B Fee(s) Transmittal should completed and an extra copy of the form should be submitted.
- III. All communications regarding this application must give the application number. Please direct all communications prior to issuance Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

#### PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail

Mail Stop ISSUE FEE Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

(703) 746-4000 or Fax

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 4 should be completed wh appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS"

maintenance fee notifications. CURRENT CORRESPONDENCE ADDRESS (Note: Legibly mark-up with any corrections or use Block 1) Note: A certificate of mailing can only be used for domestic mailings of Fee(s) Transmittal. This certificate cannot be used for any other accompany papers. Each additional paper, such as an assignment or formal drawing, m have its own certificate of mailing or transmission. 03/09/2004 7590 Koda & Androlia Certificate of Mailing or Transmission I hereby certify that this Fee(s) Transmittal is being deposited with the Un States Postal Service with sufficient postage for first class mail in an envel addressed to the Mail Stop ISSUE FEE address above, or being facsim transmitted to the USPTO, on the date indicated below. 2029 Century Park East **Suite 1430** Los Angeles, CA 90067-3024 (Depositor's na (Signat (D APPLICATION NO. FILING DATE FIRST NAMED INVENTOR ATTORNEY DOCKET NO. CONFIRMATION NO. 172A 3244 PCT 10/088,420 03/13/2002 Toshikazu Uchiyama 5068 TITLE OF INVENTION: PIEZOELECTRIC OSCILLATOR APPLN. TYPE SMALL ENTITY **ISSUE FEE PUBLICATION FEE** TOTAL FEE(S) DUE DATE DUE NO \$1630 06/09/2004 nonprovisional \$1330 \$300 **EXAMINER** ART UNIT **CLASS-SUBCLASS** LAM, TUAN THIEU 2816 331-1160FE 1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363). 2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached. firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent Fee Address" indication (or "Fee Address" Indication form attorneys or agents. If no name is listed, no name PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required. will be printed. 3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type) PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. Inclusion of assignee data is only appropriate when an assignment been previously submitted to the USPTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment. (B) RESIDENCE: (CITY and STATE OR COUNTRY) (A) NAME OF ASSIGNEE ☐ individual Please check the appropriate assignee category or categories (will not be printed on the patent); Corporation or other private group entity ☐ governm 4a. The following fee(s) are enclosed: 4b. Payment of Fee(s): ☐ Issue Fee A check in the amount of the fee(s) is enclosed. ☐ Publication Fee ☐ Payment by credit card. Form PTO-2038 is attached. ☐ The Director is hereby authorized by charge the required fee(s), or credit any overpayment ☐ Advance Order - # of Copies \_ Deposit Account Number (enclose an extra copy of this form). Director for Patents is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above. (Authorized Signature) (Date) NOTE; The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Alexandria, Virginia 22313-1450.

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7590 03/09/2004		EXAMINER		
Koda & Androlia			LAM, TUAN THIEU	
2029 Century Park Suite 1430	2029 Century Park East Suite 1430		ART UNIT	PAPER NUMBER
Los Angeles, CA 90067-3024			2816	

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 0 day(s). If the issue fee is paid on the date that is three months after t mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a ha months) after the mailing date of this notice, the Patent Term Adjustment will be 0 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date th determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retriev (PAIR) system (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office Patent Legal Administration at (703) 305-1383. Questions relating to issue and publication fee payments should directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.

	Application No.	Applicant(s)	
	10/088,420	UCHIYAMA ET AL.	
Notice of Allowability	Examiner	Art Unit	
	Tuan T. Lam	2816	
The MAILING DATE of this communication apperature All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIOF the Office or upon petition by the applicant. See 37 CFR 1.313	(OR REMAINS) CLOSED in this app or other appropriate communication GHTS. This application is subject to	olication. If not include will be mailed in due	ed course. <b>THIS</b>
1. X This communication is responsive to the amendment filed 3	<u>2/3/2004</u> .		
2. $\boxtimes$ The allowed claim(s) is/are <u>41,42,46 and 48-52</u> .			
3. $igspace$ The drawings filed on <u>13 March 2002</u> are accepted by the l	Examiner.		
<ul> <li>4.  Acknowledgment is made of a claim for foreign priority una)  All b)  Some* c)  None of the:  1.  Certified copies of the priority documents have  2.  Certified copies of the priority documents have  3.  Copies of the certified copies of the priority documents have  International Bureau (PCT Rule 17.2(a)).  * Certified copies not received:  Applicant has THREE MONTHS FROM THE "MAILING DATE" noted below. Failure to timely comply will result in ABANDONM THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.</li> <li>5.  A SUBSTITUTE OATH OR DECLARATION must be submit INFORMAL PATENT APPLICATION (PTO-152) which give  (a)  including changes required by the Notice of Draftspers  1)  hereto or 2)  to Paper No./Mail Date  (b)  including changes required by the attached Examiner's  Paper No./Mail Date  Identifying indicia such as the application number (see 37 CFR 1. each sheet. Replacement sheet(s) should be labeled as such in the  post attached Examiner's comment regarding REQUIREMENT in the  post attached Examiner's comment regarding REQUIREMENT in  the  post attached Examiner's comment regarding REQUIREMENT in  the  post attached Examiner's comment regarding REQUIREMENT in  the  post attached Examiner's comment regarding REQUIREMENT in  the  post attached Examiner's comment regarding REQUIREMENT in  the  post attached Examiner's comment regarding REQUIREMENT in  the  province of the priority document sheet  in  the  priority document  in  the</li></ul>	been received.  been received in Application No cuments have been received in this application.  between the attached EXAMINER's reason(s) why the oath or declarated be submitted.  con's Patent Drawing Review (PTO-Se Amendment / Comment or in the Ose Amendment / Comment or in the Ose Amendment / Comment or in the Ose Amendment according to 37 CFR 1.121(content of BIOLOGICAL MATERIAL metallic or comment or content or conte	national stage applicational stage applicational stage application of the front (not the d).	quirements OTICE OF
Attachment(s)  1. ☐ Notice of References Cited (PTO-892)  2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/0 Paper No./Mail Date  4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material	5. Notice of Informal Page 1. Interview Summary Paper No./Mail Dat 7. Examiner's Amendm 8. Examiner's Stateme 9. Other	(PTO-413), e nent/Comment	

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR
 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The following changes have been made to the subject application:

Claim 51: line 6, "a bypass" has been changed to --said bypass--.

The change has been made to provide antecedent basis for the bypass transistor in order to comply with the 35USC 112, second paragraph and to place the application in a condition for allowance.

2. The following is an examiner's statement of reasons for allowance: the rejection of claim 52 under 35USC 102(e) has been withdrawn because the applied reference does not meet the requirement under 35USC 102(e). The amendment filed 2/3/2003 has overcome the technical deficiencies and the prior art of record. The prior art of record fails to teach or fairly suggest first and second quick start up circuits as called for in claims 41-42, quick start up circuit comprising a bypass transistor, a control transistor switch controls said bypass transistor, a capacitor connected to abase of said control transistor switch as called for in claim 46, quick start up circuit comprising a single NPN transistor, a capacitor connected to a base of said single NPN transistor, a start up quickening voltage is applied, for said predetermined length of time, to said piezo resonator from said power supply voltage Vcc line via said NPN transistor, thus temporality increasing electric current that flows in said piezo resonator to forcibly vibrate said piezo resonator and making start up of said piezo faster as called for in claims 52. Therefore, claims 41-42, 46 and 48-52 are presently allowed.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T. Lam whose telephone number is 571-272-1744. The examiner can normally be reached on Monday to Friday (7:30 am to 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TIMOTHY P CALLAHAN can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tuan T. Lam Primary Examiner

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3/3/2004